

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Susan M. Duncan

Attorney Docket No. ADAP-1-1002

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Examiner: T. Reis

Title: SPACE CONFIGURATION DESIGN TOOL

SECOND DECLARATION UNDER 37 C.F.R. § 1.132 OF LOUIS S. TENENBAUM
TO THE COMMISSIONER OF PATENTS:

I, Louis S. Tenenbaum, having an address at P.O. Box 60027, Potomac,
5 Maryland 20859, pursuant to 37 C.F.R. § 1.132, hereby state as follows:

1. I have worked in the field of home modifications since 1988. For the past
several years I have added speaking, training and writing about home modifications to my
work. I taught all over the country for Rebuilding Together with Christmas in April under a
grant from the U.S. Administration on Aging. I speak at conferences and seminars of
10 professionals in the aging, health and construction industries. I write a column for
HousingZone.com for professional remodelers working in home modifications. I make this
declaration as an addendum to my January 25, 2004 declaration.

2. There are few specialized tools available for the designer of accessible
environments or modifications. There are some standard product templates to use in
15 drawings. The templates help see how design elements can be placed in a space. The
templates are limited because they do not show how wheelchairs move through and amongst
the space and the located design elements. More specifically, these tools are static in that the
symbol is either cut out and attached to or drawn on a drawing. As a static symbol, no
movement is shown. In addition, because they are two-dimensional, even if they were
20 moveable, the visual impact would be minimal, at best. A two-dimensional template can only
be used to mark or indicate a static location on a design plan, thereby providing architectural

scale and verifying clearances associated with the wheelchair at that location. However, such a static template does not visually illustrate the actual *movement* of a person using a wheelchair or other types of mobility equipment as it negotiates the space. As yet another drawback, using the templates as an overlay requires manual manipulation of the template, which obscures the visual movement being demonstrated.

3. A key to accessible design is the ability to picture and understand how a wheelchair is able to negotiate turns and spaces. This requires understanding the space the maneuvering wheelchair occupies in three dimensions—the height as well as length and width. It is not only the interface of the wheelchair on the floor that is important but the full height of the user in the environment. Wheelchair users occupy different amounts of space at different heights above the floor. The feet are widest, the knees next, then shoulders and the head. The space occupied by a spinning wheelchair has been compared to the space occupied by the layers of a wedding cake. Foot clearance needed in the space just above the floor is larger than the clearance needed for knees, and that larger than the space needed for shoulders. Evaluating a space for maneuvering has to occur at all levels. The floor space under a sink counter, for example, can accommodate feet, the space inside the drainpipe can accommodate the knees, while the counter itself bumps the wheelchair user at their lower chest cavity.

4. For the better part of the last twenty years, and certainly since the heightened interest nationwide in accessibility issues, there is a great need for design tools that can help the designer view three dimensional layout issues on a set of drawings. There has also been a need for tools that the designer can use to help clients and other non-designers to understand the issues in order to communicate the design and receive feedback. Despite the existence of static tools such as overlay templates (e.g., Bobrick), people in the industry were unable to create a tool that overcame the limitations described above with the static tools and meet the industry requirements for accessibility design.

5. I have had an opportunity to use a prototype of the Susan Duncan's Visualizer® Set tool. It is extremely valuable for resolving the design and communication issues described above including the ability to picture the maneuverability of a wheelchair through spatial layout and the interface of the height dimensions of a wheelchair and user with the height of items in the space. The Visualizer Set includes a three-dimensional member shaped as a human seated in a wheelchair. The member is scaled to allow accurate representation of the movement of the three-dimensional member within the spaces of known scale of a design plan. It further includes a three dimensional base extending downwardly and outwardly from the three-dimensional member, the base having a peripheral edge shaped to coincide with a scaled space envelope desired for movement of a wheelchair. It also includes a wand extending from the three-dimensional member used to move the tool along design plan paths.

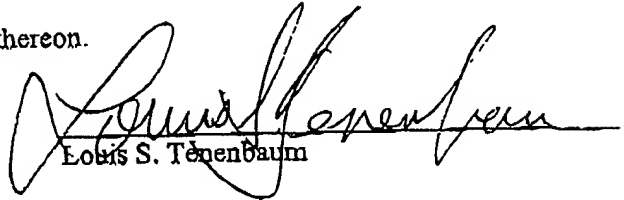
6. Because of the specific features of the Visualizer tool described above, the tool fills the long recognized gap in the accessible environments designer's tool kit. This tool has value for the designer working in their office. It has value as a teaching tool to explain the issues to groups. It has value to communicate to clients and other non-design professionals about the issues as well as about the details of a particular design. In addition the very availability of the Visualizer Set tool will be notice to designers not yet familiar with these issues that the issues exist. Buying and using the tool will reveal the issues to a user.

I hereby further declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of

Title 18 of the United States Code, and that willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: _____

8/11/05


Louis S. Tenenbaum

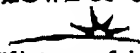
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